

selected for review included: i) demographic information and ii) diagnosis codes within the past 12 months for sexually transmitted infections or injection drug use. Accuracy of EHR identification of PrEP eligible ED patients was assessed by calculating sensitivity and area under the curve (AOC).

**Results:** Over the nine-month period, HPA assessed 1,489 ED patients for PrEP eligibility. Test characteristics of EHR in determining PrEP eligibility were: sensitivity 6.3% (95%CI 4.3%-8.8%), specificity 96.1% (95%CI 95.3%-96.8%), and AOC 0.54 (95% CI 0.50-0.57).

**Conclusion:** Available EHR information was unable to identify the vast majority of PrEP eligible ED patients. Addressing this deficiency would require improvements in either the content of EHR data fields or the fidelity with which they are recorded by treating providers. Given the ease with which EHR-based screening can be automated and high-specificity, the EHR would still have utility in facilitating identification of some individuals who could benefit from referral to a PrEP provider.

## 201 Equivocal Ultrasound in Pediatric Appendicitis is Prevalent, Poorly Documented, and Predicts Additional Imaging

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**Background and Objectives:** The Pediatric Appendicitis Risk Calculator (pARC) quantifies the risk of appendicitis in pediatric patients and may guide diagnostic imaging, such as a focused abdominal ultrasound (US). Unfortunately, many USs are read as indeterminate/equivocal. We examined the association between the pARC score and an equivocal US report for pediatric appendicitis

**Methods:** This study is part of a larger, multi-center prospective cohort study evaluating patients aged 5-20.9 years presenting to 11 Kaiser Permanente Northern California (KPNC) emergency departments (EDs) with right-sided or diffuse abdominal pain of <5 days between 01/2016 and 12/2018. We identified a subset of patients (n=394) who had an abdominal US. US reports (negative, positive, or equivocal) and follow up intervention (further imaging) were categorized. Equivocal was defined as non-visualization of the appendix and further subcategories were based on notation of secondary signs of inflammation (inter-rater reliably  $\alpha=0.92$ ). We used multivariate logistic regression, adjusting for multiple patient and facility-level predictors, to examine the association between pARC score and likelihood of an indeterminate report

**Results:** The majority (89%) of US reports were equivocal and varied across facilities (range 71% to 100%). Only 26% reported secondary signs and documentation was limited and variable (13% documented free fluid, 7% enlarged lymph nodes, 5% peristalsis, 1% right lower quadrant tenderness, <1% other). We found pARC scores of >85% more likely to have positive US findings and significantly lower odds of indeterminate US (OR 0.08, p value=0.023). pARC probabilities below 85% did not show a statistically significant association with US reports. Among patients with an equivocal US, patients with secondary signs of inflammation had a higher rate of subsequent CT imaging compared to those with no secondary signs reported (0.38 [95% CI: 0.28-0.48] versus 0.27 [95% CI: 0.22-0.33])

**Conclusion:** The vast majority of US reports for pediatric abdominal pain in our community EDs were equivocal. This may contribute to unnecessary testing and interventions. Opportunities exist to improve and standardize US reporting to aid in the diagnosis of appendicitis.

## 202 Difficult Intravenous Access as Independent Predictor of Prolonged Length of Stay in the Emergency Department

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**Background and Objectives:** Difficult IV access (DIVA) is common in the emergency department (ED). Multiple studies have reported predictors for DIVA but it is not known how DIVA affect ED throughput and overall length of stay (LOS). We investigated the extent to which time to IV placement in patients with DIVA influences outcomes including time to first lab draw, therapies, imaging study completion, and ED LOS, while accounting for patient age and acuity

**Methods:** All ED patients with DIVA seen between 2017-2019 were included. Data was extracted from the electronic medical record, with DIVA defined as patients requiring ultrasound-guided IV access performed by physicians or advanced practitioners (APPs) as opposed to nursing staff alone. ED throughput variables including time to IV placement, laboratory results, IV therapies such as analgesics or fluids, IV contrast administration, and ED LOS were compared between nursing performed landmark-based IVs (RN-IV) and DIVA patients. The 50/75/90 (th) percentiles of door-to-IV times, laboratory test completion, time to therapies, and imaging were entered into a multivariable regression model predicting ED LOS adjusted for subject acuity determined by ED triage area and age. Incidence rate ratios (IRRs) were estimated for all regressors. Quantile regression analysis was used to examine the impact of delayed IV access on ED LOS

**Results:** Over the study period, a total of 82,522 subjects were included with a median age of 56, of which 50.7% were female. DIVA occurred in 4.5% of patient visits. For cases with DIVA, patients experienced delays in time to completed lab work (27 min, p-value < 0.001), time to medications (13 min, p-value < 0.001), time to fluids (11 min, p-value < 0.001), and time to complete imaging (34 min, p-value < 0.001). Delays in successful IV placement independently predicted an increased ED LOS (273 min, p-value < 0.001). The magnitude of the effect of IV access delays on ED throughput parameters were exaggerated in DIVA cases with lower clinical acuity and patients of advanced age

**Conclusion:** In patients with DIVA, a delay in successful IV access was associated with reduced throughput on multiple measures of ED efficiency. A more expeditious approach to achieving IV access in patients predicted to have DIVA could potentially shorten time to diagnostics and treatment, as well as ED disposition.

## 203 Point-of-Care Ultrasound to Assess Gastric Content in Pediatric Emergency Department Patients

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**Background and Objectives:** Procedural sedation and analgesia (PSA) is a common procedure in the Pediatric Emergency Department (PED) for patients requiring urgent noxious interventions. There is debate regarding the optimal timing of PSA in relation to nil per os (NPO) status. Gastric point-of-care ultrasound (POCUS) provides the ability to directly measure stomach content and is being used as a surrogate for aspiration risk in general anesthesia. We